



# Sports going invisible in war against infection

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By Gary Mihoces, USA TODAY

College and professional sports teams are starting to use high-tech hygiene to combat a drug-resistant staph infection that, in extreme cases, can kill.

An emphasis remains on basic precautions such as keeping wounds covered and not sharing towels to prevent the spread of methicillin-resistant staphylococcus aureus, known as MRSA. But now other methods are being marketed:

- This month Virginia Tech had wrestling mats, synthetic turf fields, football pads, saunas and more sprayed with an "antimicrobial" coating. Developers say it kills microbes for years by piercing them with spear-shaped molecules without chemical poisoning.
- Several NHL and NFL clubs are using a boxlike, stainless steel device. The firm marketing it says it uses ozone (no soap or water) to rid gear of bacteria.

"We hadn't had any major problems at all, but how about preventive maintenance? That's what really started this ball rolling," says Denie Marie, a facilities manager at Virginia Tech.

MRSA can cause skin and bone infections, pneumonia and bloodstream infections. Resistant to some antibiotics, MRSA can be treated with others.

Long a problem in hospitals, it has moved to sports in recent years. With baseball's Baltimore Orioles last season, Sammy Sosa missed 16 games with MRSA in his foot. It has struck NFL and NHL players and high school and college athletes. In 2003, MRSA was listed as the cause of death of a football player at Lycoming College in Pennsylvania.

After University of Tulsa football player Devin Adair died in April, the *Tulsa World* reported the death was from "complications of a staph infection." The official cause has not been announced, pending test results, according to the Oklahoma Office of the Chief Medical Examiner.

The Centers for Disease Control and Prevention recommend preventative measures such as washing hands, treating wounds, keeping them covered and not sharing potentially contaminated items.

"One of the most important things is really just increasing the awareness on teams ... so they're more likely to report it, get it checked out," says Jeff Hageman, a CDC epidemiologist in Atlanta.

He says the CDC recommends use of disinfectants to clean "high-touch surfaces" such as weight lifting equipment. Asked about anti-microbial shields and ozone cleansing, Hageman says, "Our major message is preventing those surfaces from becoming contaminated to begin with, so that entails making sure you're getting treated. But if you do have an infection, keep it covered with bandages so it doesn't get on the surface. ... In the investigations that have been performed, the environment hasn't played a huge role in transmission. It's been mostly skin-to-skin contact."

But there are products that developers say can cleanse the sports environment.

Sport Coatings, a division of Coatings Specialist Group in Rochester Hills, Mich., markets a "Sports Anti-microbial System" that was launched in April.

Firm President Art McWood says that while Virginia Tech is the first major user, others are interested.

McWood says the system utilizes technology used for decades on such items as surgical dressings, surgical garments, shoes and diapers. His product is applied with electrostatic spray to enhance coverage. "There's a physical killing of the microbe. ... It's kind of like a blanket of swords," McWood says.

His firm spent three days spraying inside Virginia Tech's field house, including a synthetic turf field, as well as an outdoor synthetic turf field. Mike Goforth, Virginia Tech director of athletic training, says the school has had only two cases of MRSA in his eight years. But he says the decision to get the treatment was "spearheaded" by football coach Frank Beamer. "He had concerns during our winter workouts. I think he saw a player vomit on the turf. That kind of sent up red flags for him," Goforth says.

McWood says his treatment also works on other bacteria, mold, fungi and algae.

The price of Virginia Tech's treatment was not disclosed. McWood says indoor treatment costs "roughly a dollar a square foot" and that outdoor treatments are "significantly less." He says the treatments last the life of a wrestling mat and that it's a "one-time application" for turf.

In Montreal, Steve Silver is president of Sani Sport, which is also in the business of skate-sharpening machines. Silver says customers often asked whether he had anything to get the "horrific smell" out of hockey gear. He says he learned the answer was to kill the bacteria.

The Sani Sport has been on the market since 2002. Silver says the ozone is entirely contained and circulated throughout the equipment to be cleaned.

"If you get rid of the bacteria, you are not only getting rid of the smell, you're really preventing the (user) of the equipment from getting hit with things like MRSA," he says.

Silver says it's used in the NFL by the Green Bay Packers, Detroit Lions, Cleveland Browns and Jacksonville Jaguars. He says his NHL clients are the Buffalo Sabres, San Jose Sharks, St. Louis Blues, Boston Bruins, Vancouver Canucks, Los Angeles Kings and Washington Capitals. Silver says the price per unit is about \$10,000, but he gives discounts to pro teams as a marketing tool.